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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/632,519	08/01/2003	Youssri Helmy	3442.1002-000	4346

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EXAMINER
ELALLAM, AHMED

ART UNIT	PAPER NUMBER
2662	

DATE MAILED: 10/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	10/632,519	HELMY ET AL.
	Examiner	Art Unit
	AHMED ELALLAM	2662

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 August 2003*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12* is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *22 December 2003* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All   b)☐ Some * c)☐ None of:

   1.☐ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
   Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

1.   The disclosure is objected to because of the following informalities:

On page 10, lines 21-22, the phrase "the result the first step" need correction.

The specification may have other typographical errors, Applicants is respectfully

requested to further review the specification for minor informalities.

Appropriate correction is required.

Drawings

2.   The drawings of figure 4 are objected to as failing to comply with 37

CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned

in the description: "200", see specification lines 14 and 15. Corrected drawing sheets in

compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid

abandonment of the application. Any amended replacement drawing sheet should

include all of the figures appearing on the immediate prior version of the sheet, even if

only one figure is being amended. The replacement sheet(s) should be labeled

"Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct

any portion of the drawing figures. If the changes are not accepted by the examiner, the

applicant will be notified and informed of any required corrective action in the next Office

action. The objection to the drawings will not be held in abeyance.

Claim Objections

3.   Claims 1-3 are objected to because of the following informalities:

In claim 1, line 9, a comma is missing after the word "network".

In claim 1, line 14, the phrase "a remote network" must be changed since it has

an antecedent basis.

In claim 1, line 16, the phrase "the multiple parallel persistent connections" lacks

antecedent basis".

In claim 2, line 21, the term "the nodes" lacks antecedent basis.

In claim 3, line 24, the term "is" does not have a meaning in the context of claim

limitation.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

4.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

5.   Claims 6-12, 9 and 10 are rejected under 35 U.S.C. 112, second paragraph, as

being indefinite for failing to particularly point out and distinctly claim the subject matter

which applicant regards as the invention.

In claim 6, the claimed limitation "the router examining the incoming packets to

determine if they are addressed to a destination node which is not local to the router,

and if so routing them to a socket interface" is indefinite, because the limitation is silent

about routing the packets that are locally addressed.

Claims 7-12 depends from claim 6, thus they are subject to the same rejection.

In claim 9, the phrase "the network connection" lacks antecedent basis.

In claim 10, the phrase "the two proxy applications" lacks antecedent basis.

Claim Rejections - 35 USC § 102

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6.   Claims 1, 2 and 6-12 are rejected under 35 U.S.C. 102(e) as being anticipated by

Bartlett et al, US 2003/0177396 A1.

Regarding claim 1, with reference to figures 1, 5, 6 and 7, Bartlett discloses a

method for handling packet traffic in a data network comprising:

routing outgoing network layer packets traffic to a local network Performance

Enhancing Proxying (PEP) peer (101 as in figure 1, and 701 as in figure 7) associated

with a host 719, , see figure 7, (claimed routing outgoing network layer packets traffic to

a local network accelerator associated with a node which is a source of the packet

traffic network, the local accelerator running a proxy application); Bartlett also discloses

intercepting the packet traffic, see [0066], and multiple TCP connections are

multiplexed onto and carried by a single backbone connection to a remote PEP peer

(107 as in figure 1, and 705 as in figure 7) , see paragraphs,[0065], [0098] and [0099],

(claimed opening at least two transport layer sessions over at least one physical layer

connection between the local network accelerator and at least one remote network

accelerator); (Examiner, in accordance with the specification, interpreted the multiple

TCP connections that are multiplexed and carried by a single backbone connection to a

remote PEP peer for carrying the packet traffic from a source host to a destination host,

as been the claimed transmitting processed packet traffic to a remote network

accelerator associated with a node which is a destination of the packet traffic via

multiple persistent connections maintained with the remote network accelerator). See

paragraph [0129].

Regarding claim 2, Bartlett discloses that the PEPs (proxying) consist of a priority

kernel 517 (unit 517, figure 5), the priority kernel is used to control the available

backbone capacity for different priority levels, the kernel uses the criteria comprising

source IP, source port number TCP port number, UDP port numbers, etc.. see

paragraph [0104]. (Claimed a proxy to proxy protocol is employed to specify at least an

original transport protocol identifier, original address, and original ports of the nodes).

Regarding claims 6 and 12, with reference to figure 5, Bartlett discloses a PEP

(Performance Enhancing Proxying) device (claimed data network routing device)

comprising:

Router module 505 connected to receive incoming packet from a source node

(example: host 301, fig. 3); Burnet discloses that the packet are IP packet that are

routed in accordance with respective IP addresses, See paragraph [0144]; (Examiner

interpreted the IP routing of Burnett, using the routing module 505, as the claimed

router examining the incoming packets to determine if they are addressed to a

destination which is not local to the router);

A TCP spoofing kernel 513 that locally acknowledge data segments (packets) received from host (301), (claimed socket interface), see paragraph [0098];

Backbone protocol kernel 515 in combination with data compression Kernel 521 (claimed proxy application), the Backbone protocol kernel 515 is used for the multiplexing of multiple TCP connections (claimed multiple transport layer connections) carried onto a single backbone connection (claimed al least one physical layer connection), see paragraph [0099]. (claimed a proxy application, connected to receive incoming traffic from the socket interface, the proxy application associated with the router (module), and the proxy application , acting as a proxy for the source node, and establishing multiple transport layer connection, the transport layer connections capable of carrying packets to a destination node in parallel).

Regarding claim 7, Bartlett discloses that the PEP 101 and its peer PEP 107 of figure 6, wherein PEP 101 receives packets from a remote host, see paragraph [0122]. (Examiner interpreted the identical PEPs (figure 6) interfacing each LAN as having the characteristic of transmitting and receiving traffic across the backbone connection as being the "claimed proxy application additionally receives packets from a network connection addressed to a destination node which is local to the router").

Regarding claim 8, Bartlett further discloses having data compression Kernel 521 for compressing data prior to transmission across the backbone link [0101], (Examiner notes that by way of symmetry, compressed data when received by the PEP, it must be decompressed so it can be delivered to the destination host). (Claimed packets are compressed by the proxy application , and additionally comprising a data

decompressor, for decompressing received packet, and the router forwards decompressed packets to the destination node).

Regarding claim 9, Bartlett discloses that data from a sending host is transmitted over multiple TCP connections that are multiplexed onto a backbone connection between peers PEPs 101 and 107. see paragraph [0111]. (claimed a network connection is persistent connection established with another data network routing device having a proxy application running thereon), (Examiner interpreted the PEP 107 as the claimed "another data network routing device having a proxy application thereon", since it has components and provides functionalities similar to that of PEP 101).

Regarding claim 10, Bartlett discloses establishing a backbone connection between the two proxying devices (PEP, each proxying device has a proxy application, as indicated above with reference to claim 9, each using a spoofing kernel. See paragraph [0111]. (claimed a proxy-to-proxy protocol is used to pass original source node and destination node information between the two proxy applications).

Regarding claim 11, Bartlett discloses a priority Kernel 517 within the PEP 101 (proxying peer) for controlling the available backbone capacity for different priority levels, the kernel 517 uses the criteria comprising source IP, source port number TCP port number, UDP port numbers, etc.. see paragraph [0104]. (Claimed a proxy-to-proxy protocol specifies an original type for the packets).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

7.   Claims 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Bartlett in view of Dillon et al, US 6,658,463).

Regarding claims 3-4, Bartlett while discloses using a compression kernel at

each PEP (Performance Enhancing Proxying peer), see paragraph [0011], it doesn't

specify that the compression is a dictionary based compression algorithm (as in claim 3)

and the coding is a Huffman coding (as in claim 4).

However, Dillon discloses in the same field of endeavor, using a dictionary based

compression algorithm for decoding data before transmission (as in claim 3) and the

coding is a Huffman coding (as in claim 4). See column 14, lines 56-67 and column 15 –

column 16, lines 57.

Therefore, it would have been obvious to an ordinary person of skill in the art, at

the time the invention was made to implement the dictionary based compression

algorithm using Huffman coding as taught by Dillon as the compression kernel of

Bartlett so that less computational resources can be used (column 15, line15-22). The

advantage in Bartlett's system would be efficient use of the available bandwidth due to

the composite benefit of compressing data with a minimized computational time.

Regarding claim 5, Bartlett does not disclose a dictionary associated with an existing end-to-end connection is utilized to service a new connection request.

However, Dillon discloses that a dictionary is used to provide high compression should data similar to earlier previously transferred data be submitted for compression. See column 15, lines 35-48. (Claimed a dictionary associated with an existing end-to-end connection is utilized to service a new connection request).

Therefore, it would have been obvious to an ordinary person of skill in the art, at the time the invention was made to use Dillon's end-to-end associated dictionaries in establishing Bartlett new connection so that prior to transmission of data , compression would be much faster if the data is similar in content to other data previously transmitted. (Dillon, column 15,lines 40-48). The advantage in Bartlett's system would be efficient use of the available bandwidth due to the composite benefit of high compression of data due to a minimized computational time, and the efficient use of the available backbone capacity due to the compression benefit.
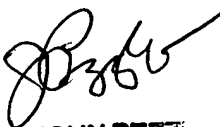

Conclusion

8.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Lafe et al, US (6,449,658); Wang, US 2004/0015591; McAlpine et al, US 2004/0103225.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to AHMED ELALLAM whose telephone number is (571) 272-3097. The examiner can normally be reached on 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Kizou Hassan can be reached on (571) 272-3088. The fax phone number

for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

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published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

AHMED   ELALLAM
Examiner
Art Unit 2662
September 29, 2004

JOHN PEZZ
PRIMARY EXAN